DOCUMENT RESUME

ED 378 705 EC 303 601

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TITLE Parental and Professional Agreement in the Assessment of Children with Disabilities: An Examination.
INSTITUTION Auburn Univ., AL. Dept. of Rehabilitation and Special Education.
PUB DATE [Oct 94]
NOTE 67p.; Paper presented at the Annual International Conference of the Council for Exceptional Children, Division for Early Childhood (10th, St. Louis, MO, October 5-9, 1994). Qualifying Paper for Ph.D. Candidacy, Auburn University.
PUB TYPE Information Analyses (070) -- Speeches/Conference Papers (150) -- Dissertations/Theses - Undetermined (040)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Age Differences; *Disabilities; Early Childhood Education; Emotional Adjustment; Evaluation Methods; *Interrater Reliability; Intervention; *Parent Participation; Parent School Relationship; Severity (of Disability); Sex Differences; Socioeconomic Influences; Special Education; *Student Evaluation; Teacher Attitudes

ABSTRACT

This paper reviews early childhood special education assessment literature, particularly as it relates to parental involvement. First, the significance of the topic is addressed by examining the importance of parental participation in the assessment and intervention process, and the influence of parental participation on various relationships. Second, the paper identifies the salient factors that appear to influence parents' observations, including: (1) adjustment to disability; (2) experience with the child; (3) age of child; (4) gender; (5) socioeconomic status; (6) severity of the disabling condition/s; and (7) the assessment instrument. Third, the critical factors that influence observations by the professional are presented. These include attitudes, professional knowledge, experience, and the assessment instrument. Fourth, the paper discusses implications for "best practice" regarding professional and parental roles, as well as considerations relating to the type of response requested from the parent and the assessment. Finally, an analysis of the studies and summary of the literature on assessment as it pertains to parental and professional congruency are presented. A table listing characteristics of the studies reviewed is appended. (Contains 115 references.) (DB)

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Parental and Professional Agreement in the Assessment of Children with Disabilities: An Examination

Sharon L. Gilbert

Fall, 1994

Qualifying Paper
for
Ph.D. Candidacy

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of
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ABSTRACT

The purpose of this paper is to review early childhood special education assessment literature, particularly as it relates to the issue of parental involvement. First, the significance of the topic is addressed by examining the importance of parental participation in the assessment and intervention process, and the influence of parental participation on relationships. Second, the author presents the salient factors that appear to influence parents' observations, including (a) adjustment to disability, (b) experience with child, (c) age of child, (d) gender, (e) socio-economic status, (f) severity of disabling condition, and (g) assessment instrument. Third, the critical factors that seem to influence observations by the professional are presented, including (a) attitudes, (b) professional knowledge, (c) experience, and (d) the assessment instrument. Fourth, the author discusses implications for "best practice" regarding professional and parental roles, as well as considerations relating to the type of response requested from the parent and the assessment. Finally, an analysis of the studies is presented followed by a summary of the research literature relating to the area of assessment as it pertains to parental and professional congruency.

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Assessment, a critical area in the field of early intervention, provides the foundation upon which services build. The referral and assessment process may be the first contact the family has with the early intervention system, setting the tone for the nature of the relationship that will develop between the family and the rest of the assessment team. The information accumulated in the assessment process provides a basis for decisions regarding the child's eligibility for services, goals for intervention, and monitoring of program effectiveness.

One means of increasing the accuracy of assessment is through the use of multiple sources of information (Bagnato & Neisworth, 1981; Gradel, Thompson, & Sheehan, 1981; Irvin, Crowell, & Bellamy, 1979; Sexton, Hall, & Thomas, 1983). Multiple sources include the use of several information providers, as well as the use of different measures and techniques in obtaining information about the child's abilities. With infants, toddlers and preschool-aged children, for example, both the professional(s) and parent(s) are highly important information providers (Sexton, Miller, & Rotatori, 1985). The different professionals can lend their expertise in evaluating the child. Parents may provide invaluable information by describing skills that cannot be readily observed during formal assessment, such as their children's toileting and self-care behaviors. Parents also have insight regarding their children's abilities in a wide array of environments and situations. Due to the vast experience parents have with their children, they can verify, clarify, or dispute the representativeness of their child's assessment results.

Use of more than one measure in which eligibility is determined also implies the use of different assessment measures and techniques. These might include observations, standardized measures, curriculum-based measures, parental interviews, rating scales, and checklists (Bailey & Wolery, 1992). Thus, through the employment of multiple resources (both persons and methods) one can expect to increase the representativeness of the skills observed and obtain a more accurate profile of the child being assessed.

Parents often are asked to complete questionnaires, checklists, interviews or observations of their children. If professionals perceive parental reports to reflect overestimations of the child's abilities, the parent's reports are not likely to be used (Carey, 1981; Sexton, Thompson, Perez, & Rheams, 1990). The information may not even be sought if the professional believes it will not be accurate due to overestimation, in comparison to the professional's score.

Comparisons are generally made between the assessment results obtained separately by the parent(s) and the professional(s). The professionals' evaluation usually sets the standard because their scores are generally given the greater credibility (Gradel et al., 1981). Interestingly, research comparing parental and professional estimates of children's abilities has produced conflicting results. Some studies have indicated that, in comparison to the professionals' score, parents have overestimated their children's abilities (Capobianco & Knox, 1964; Ewert & Green, 1957; Gradel et al., 1981; Keith & Markie, 1969; Schafer, Bell, & Spalding, 1987; Sexton et al., 1983; Stancin, Reuter, Dunn, & Bickett, 1984; Tew, Laurence, & Samuel, 1974). By contrast, it has been reported that parents underestimate their children's abilities, in relation to the professional's scores (Field, Hallock, Dempsey, & Shuman, 1978). An inappropriate assumption would be that the parent's scores are inaccurate simply because they differ from the professional's scores. In fact, the professional's estimates also could be considered an

underestimation of the child's abilities, as was suggested by Blacher-Dixon and Simeonsson (1981) and Gradel and her colleagues (1981).

Finally, several researchers have reported parents are reliable estimators of their children's abilities. Results indicated parental and professional estimates to be highly correlated (Beckman, 1984; Gradel et al., 1981; Hanson, Vail, & Irvin, 1979; Sexton, Hall, & Thomas, 1984; Sexton, Miller, & Murdock, 1984).

The purpose of this paper is to review early childhood special education assessment literature, particularly as it relates to the issue of parental and professional involvement. First, the significance of the topic will be addressed by examining the importance of parental participation in the assessment and intervention process, and the influence of parental participation on relationships. Second, the author will present the salient factors that seem to influence parents' observations, including (a) adjustment to disability, (b) experience with child, (c) age of child, (d) gender, (e) socio-economic status, (f) severity of disabling condition, and (g) assessment instrument. Third, the critical factors that seem to influence observations by the professional will be presented, including (a) attitudes, (b) professional knowledge, (c) experience, and (d) assessment instrument. Fourth, implications for "best practice" regarding professional and parental roles will be discussed. Fifth, an analysis of the studies will be presented. Finally, the reader is introduced to a summary of the research literature related to the area of assessment in terms of parental and professional congruency.

SIGNIFICANCE OF THE TOPIC

The significance of the topic under consideration will be addressed first by discussing the role of parental participation in the assessment and intervention process (i.e. family-centered philosophy, teaming models, multiple sources of information, legislative issues, cost effectiveness, and increased involvement). Second, the author will explore the influence of parental participation on the following relationships: (a) mother-child, (b) child-environment, and (c) parent-professional.

Parental Participation in Assessment/Intervention

Parental and professional agreement on objective measures of a child's abilities has been studied extensively in the field of early childhood special education (e.g. Sexton et al., 1982. 1983, 1984a, 1984b, 1985, 1990). The focus of early intervention was initially on the child in isolation (Bailey & Wolery, 1992). In due time, however, this viewpoint shifted to one in which the focus was on the child in the context of the family (Dunst, Trivette, & Deal, 1988; Turnbull & Turnbull, 1990). In a review of early intervention programs, for example, Guralnick (1991) points out that the importance of family involvement in the intervention program has increased over the years as a family-centered philosophy has emerged.

One important element of this family-centered approach is the issue of meaningful parental involvement. According to Schafer et al., (1987), the meaningfulness of this involvement hinges on parents' ability to assess their children's strengths and needs. As a corollary to this premise, this author contends that it is crucial for professionals in the field of early intervention to recognize the validity and degree of reliability of parental information. Unfortunately, however, the field's understanding of the accuracy of parental information is limited. For instance, does

the professional believe parents are accurate reporters of their child's abilities? What circumstances might influence the parent's congruency with the professional's observations of the child's skills?

Several questions arise when one considers the inclusion of parents in the assessment process. For example, how can parents be involved? Why involve them? How does their participation influence the services provided? What information can parents bring to the process that cannot be ascertained by the professional's direct observation of the child? Is the information parents provide accurate and useful? This author suggests the answers to these questions may determine whether or not the information is gathered from the parents. Professional opinions of parental reports could influence the extent to which information is sought from the parent, how that information is viewed, and the amount of effort the professional expends in making the parent a team member.

Family-Centered Philosophy

A tenet of a family-centered philosophy is the inclusion of parents in the provision of services to their children and respect for family members as the primary decision-maker for their child (Leviton, Mueller, & Kauffman, 1992). This philosophy is based on family involvement. The focus of intervention is the family versus the child (Pearl, 1993). The role of parents in early intervention services, according to this model, is first and foremost that of decision-maker. Parents, not the professional, determine what is best for their family. According to the family-centered consultation model described by Leviton and colleagues (1992), the parent determines the role and degree of involvement the professional will have in the process. The professional and parent work together to determine the services the parent would like to receive. The professional will work with the parent in exploring the options available to meet the family's goals. The family determines ways to meet their goals that will best suit their family "style". The professionals' role throughout the process shifts with the changing needs of the family. The major characteristic of this model is that it is a "collaborative" relationship the parent and professional share with the focus of intervention being the family and not just the child (Pearl, 1993).

This family-centered approach receives support from the family system theory. This theory indicates the family is a growing and ever-changing system within other larger systems in society (Bronfenbrenner, 1977). Whatever impacts one member of the family or part of the system will affect the other parts (Bailey, 1987). In this approach, the professional helps the family help themselves as the family works to achieve normalization in their family life (Bailey, McWilliam, Winton, & Simeonsson, 1991).

The conceptual model of family-centered care also lends its support to the family-centered approach. This model is a combination of the family systems theory and family empowerment. Family empowerment means families help themselves and receive help in such a way that they feel in control of their own decisions and life (Rappaport, 1987). Family-centered care recognizes the family as the constant in the child's life, the parent and professional are equals in the collaboration process, and the individual personalities making up the family are recognized and respected (Shelton, Jeppson, & Johnson, 1987). In essence, family-centered care provides support to the family in their natural caregiving roles by building on the unique strengths of the individual and family (Pearl, 1993).

Two additional areas of support for this family-centered approach come from legislation (P.L. 99-457, 1986) and best practice (Bailey, Buysse, Edmondson, & Smith, 1992). The family-centered philosophy calls for the inclusion of parents from the very beginning of the early intervention process. Parents are encouraged to take as involved a role in the assessment of their child as they choose. Therefore, professionals actively seek to include the parents and be abreast of the best ways to facilitate parental inclusion.

Teaming Models

Professional teaming models influence the extent to which parental participation is sought and possibly valued. The teaming approaches currently used in the field of early intervention include the multi-, inter-, and transdisciplinary models (Foley, 1990; Linder, 1990, 1993). The differences between these models lie in the varying degrees with which the professionals and parents work together to assess the child and then plan and provide intervention. With the multidisciplinary teaming model, the professionals complete their own individual assessments, and plan and implement their interventions separately within their specific disciplines. The parent is not typically included as a contributing part of the team because the child is the center of the service delivery focus (Foley, 1990).

Nash (1990) paints a different view of the multidisciplinary team as one that does encourage parent participation. From a review of the literature, he discusses factors that impact team functioning and how those factors might influence parental participation on the team. Cited as some of the factors that limit parental involvement are (a) bias on the part of professionals and their agencies, (b) the perception that parents are inferior team members, and (c) communication barriers between professionals and parents (Nash, 1990). The influence of these factors can be minimized by professionals becoming informed about parental expertise, becoming an advocate in their agency for parental involvement, and seeking to limit the use of jargon in communications with the parents. Nash (1990) also encourages professionals to approach each family as a new team with their own strengths and needs, as well as displaying flexibility with established teams when families change.

In the interdisciplinary teaming model, the professionals will assess and implement on their own. The professionals will typically have some sharing of information among themselves at the planning and intervention stages to acquaint the team with the focus and progress of their individual therapies. Again, the parents usually do not have an active role in this process by providing information about the representativeness of the child's behaviors, acting as a facilitator during the assessment, or completing a developmental checklist on their child. Nevertheless, they may be present for the initial staffing where assessment results and intervention are discussed, as well as receive updates on the intervention (Foley, 1990).

By contrast, the transdisciplinary model seeks active involvement by the parents in the stages of assessment, planning, and intervention. This model has the potential for more fully using the expertise of the individual team members by encouraging the sharing of information. Follow-through and support can be enhanced by the participation of the parents as part of the team (Linder, 1990, 1993). The assessment and planning is completed through a collaborative team effort and the intervention is implemented by the parent and a primary caregiver (Foley, 1990). Within this teaming model, parental participation is encouraged and their input is respected without questioning the accuracy of their observations (Sexton, Miller, & Murdock, 1984). As

can be seen, the transdisciplinary approach uses the parent(s) to a fuller extent as an active and important part of the team, providing valuable information (Sexton et al., 1983).

The transdisciplinary model incorporates arena assessment, an approach in which the child has hands-on contact with the chosen facilitator in a "play-like" and more natural setting (Linder, 1990,). The facilitator may be the parent or one of the professionals who has developed rapport with the child. In either case, the parent can be close by to provide a comforting presence for the child if the need arises. The facilitator is aware of the behaviors the other team members need to observe to assess the child's abilities (Foley, 1990). The team members watching may either be completing a portion of a standardized, curriculum-based, or observation assessment, or an assessment specific to their area of expertise (Linder, 1990, 1993; Wolery & Dyk, 1984).

The primary disadvantage to the transdisciplinary approach centers on the difficulty in building an efficient team in which the individual members are willing to engage in both a release and expansion of their more typical professional roles (Linder, 1990; Raver, 1991). Administrative support to implement this type of team also is crucial. The many advantages, however, far outweigh this disadvantage. The following are some of the significant advantages to the transdisciplinary teaming approach:

- the parent has the opportunity to be a part of the process (Linder, 1990);
- redundancy in evaluation and question-asking is reduced (Wolery & Dyk, 1984);
- the child is in a more natural environment, which should encourage a higher level of response (Linder, 1990; Raver, 1991);
- the parent and other team members all see the same behaviors on which decisions regarding intervention will be based (Foley, 1990; Wolery & Dyk, 1984);
- the parent is available during the evaluation to comfort and encourage the child (Linder, 1990);
- the parent is able to provide anecdotal information about the child's performance;
- the parent can respond to the representativeness of the child's behavior at the time of the evaluation, thus increasing the representativeness of the assessment (Foley. 1990);
- the parent can judge if the strangeness of the setting may have influenced the child's responses (Shelton, 1989);
- this approach communicates a comprehensive, integrated view of the child by all team members (Linder, 1990; Wolery & Dyk, 1984); and
- a framework is provided to collect information from multiple sources (Foley, 1990), which may increase the reliability of the assessment results (Squires, Nickel, & Bricker, 1990).

Multiple Sources of Information

As mentioned earlier, some of the teaming approaches use multiple sources of information. There are two advantages to using multiple sources. Firstly, use of assessment teams increases the reliability of an assessment by pooling the expertise of other people (Squires et al., 1990). Specialists can provide their expertise in assessing a child and planning a program. Secondly, the team approach accesses multiple sources of information by gathering assessment results from people who have seen the child in other settings, thereby increasing the representativeness of the skills observed (Fleischer, Belgredan, Bagnato, & Ogonosky, 1990; Gradel et al., 1981; Sexton et al., 1983; Sexton, Kelley, & Scott, 1982; Sexton et al., 1990; Squires et al., 1990). These two advantages can help ensure the needs of the child will be met (Sexton et al., 1983, 1984).

There are several methods to obtain assessment information from parents. These include standardized measures (i.e. Bayley Scales of Infant Development: Second edition, Bayley, 1993), checklists (i.e. Assessment, Evaluation, and Programming System, Bricker, 1993), observations (i.e. Developmental Observation Checklist System, Hresko, Miguel, Sherbenou, & Burton, 1994), and judgment-based assessment (JBA) (Fleischer et al, 1990). JBA is used to collect information from professionals and caregivers about the child and his or her environment and to quantify that information. This type of assessment encourages the use of various sources providing differing views of the child in other settings and at other times. Parental input is one of the important sources in JBA. By examining the similarities and differences in the observations and the factors influencing them, a more complete picture of the child can be formed. The discussion is not to judge whose observations are accurate and whose are inaccurate but, rather, to increase the knowledge of the child's abilities and the reliability of the assessment (Dinnebeil & Rule, 1994).

Lichtenstein and Ireton (1984) present possible reasons for parental and professional discrepancy and a means to discuss these differences. It might serve the professional and parent to examine why there is a discrepancy in their observations of the child's skills. If, from the evaluation results, the professional suspects a developmental delay but the parent reports no problems, there could be three possible explanations for this discrepancy. First, the child may not have performed at his or her best because of discomfort caused by a strange testing situation and an unfamiliar examiner. Second, the parent may not have known the appropriate age ranges in which to expect the child to do certain skills. Third, the parent might be defensive about the child's delay in development and be in denial of a problem. Each of these situations would provide an opportunity for the parent and professional to resolve and/or discuss the discrepancy. In the first situation, the parent can provide valuable information about the child's level of comfort with the assessment situation and suggest ways to obtain the child's best efforts. Parent education of child development and counseling to help the parent deal with the child's developmental delay can be useful in the other two scenarios (Lichtenstein & Ireton, 1984).

If the parent reports a delay but the evaluation does not indicate a problem, there is still a need for discussion. The parent may have reported behaviors that were not observed during the assessment, such as bed-wetting or self-abusive behaviors. The professional can respond to the parent's concerns about behaviors that may not have been observed and provide suggestions for intervention or make referrals.

Clearly, one of the critical multiple sources to consider is the parent, who has been included, at some level, in the assessment process for more than a decade (e.g. Dakota Project and Head Start). Parents are the expert on their children's behavior and have seen their children in multiple settings (Bagnato & Neisworth, 1991; Lichtenstein & Ireton, 1984; Shelton, 1989). Information derived from the parent's personal experience with the child should be used to the fullest extent by the intervention team. In support of this contention is legislation (i.e., P.L. 94-142, 1975; P.L. 99-457, 1986) which has mandated options for parental participation to occur. These options should allow the family to participate at whatever level and to the degree they choose. The next section speaks to the legislative issues regarding parental participation in the assessment of young children with disabilities.

Legislative Issues

Public Law 94-142, the Education for all Handicapped Children Act of 1975, encouraged parents to take a more active role in the services provided for their young children with disabilities. A parent must agree to have their child assessed, be informed of the assessment results, and may participate in the planning of intervention and program placement. A parent also has the right to have access to their child's records and to appeal any decision regarding their child's special education services with which they disagree (Bailey & Wolery, 1989).

Public Law 99-457, the Education of all Handicapped Act Amendments of 1986, went a step further in clarifying the parents' and professionals' roles and involvement in the early intervention process by extending parental involvement to the birth through 2 year old group (Fewell, 1991). This clarification of the parent's role was in recognition of the importance and impact of the family on this younger age group. Part B of Public Law 99-457 (1986) addresses the 3 to 5 year old population and encourages parents to participate on a team in the writing of the Individualized Education Plan (IEP) (Nash, 1990). Part H of Public Law 99-457 (1986) deals with the birth through 2 year old age group. This portion of the legislation calls for the development of an Individualized Family Service Plan (IFSP). It also gives families the right to select and prioritize the objectives on the IFSP and evaluate the effectiveness of the services provided to them and their child (Linder, 1993). The parent also may include a statement of the family's concerns, priorities, and resources, as well as a description of family goals and services to be provided (Bailey & Wolery, 1992). Family involvement is one of the essential components of Public Law 99-457 (1986) (Pearl, 1993). However, the realization of parental participation in the early process has been limited.

Public Law 102-119 (1991) also addressed parental participation in the assessment and intervention process. This legislation mandated that the assessment be family-directed and address the resources, priorities and concerns of the family. The family also would assist in identifying the necessary supports and services to help the family meet the developmental needs of their infant or toddler with a disability. This family-directed approach implies the family has the right to make active and informed decisions regarding the assessment during the process. For example, the parent may choose the role they wish to take during the assessment (i.e. observer or facilitator). Public Law 102-119 (1991) also provides options for parents to be the decision-maker in designing and implementing intervention for their infants and toddlers. The role of decision-maker should be a natural one for the parent considering that they are the ones ultimately responsible for the care and well-being of their child. The early intervention personnel, therefore, should not assume the role of decision-maker simply because the parent has come for help.

While legislation (P.L. 94-142, 1975; P.L. 99-457, 1986; & P.L. 102-119, 1991) has encouraged early interventionists to use the parents' expertise in screening and assessment, it also has made demands on the professional. One of these demands is to develop a child find system (P.L. 99-457, 1986). Each state's legislators must develop a process in which children with disabilities can be found and referred to the proper organizations for services. One of the ways children with disabilities are found is through the use of screenings, which are short tests used only to determine if the child needs to be assessed further. Because a large number of children may need to be screened, professionals must consider the cost and time involved in the process. Use of parents in administering the screening to their own children helps the professional save time and money, respects parent information, and may empower families. As well, this consideration may result in cost-effective measures.

Cost Effectiveness

Parental information and participation can be used to cut costs in providing early intervention services. In this day and age of spending cuts and personnel shortages, it is crucial to find ways to provide services in an efficient and cost effective manner. The provision of early intervention services has been shown to be cost effective (Guralnick, 1991). Intervention begun as early as possible can prevent secondary disabling conditions, produce gains in several areas of development, provide support to the family, reduce family stress, and reduce the child's need for further or more extensive services in the future (Heward & Orlansky, 1992; Shonkoff & Hauser-Cram, 1987). It is important, however, that each area of the early intervention process be examined to insure that cost effective means are being used. Three of these areas are in screening and assessing children and providing intervention. One means of increasing cost effectiveness and efficiency in these areas is by involving the family (Squires et al., 1990).

It is important to identify children who need early intervention services as soon as possible. States, at the federal government's request, have instituted time-lines to insure that early intervention services are provided in a prompt manner. Large and/or multiple screenings used to find children who need services can be time consuming and expensive. One means to gather information quickly and efficiently is to rely on parental report for some of the information. Parents can be effective in completing screenings on their children to determine if a complete assessment will be needed (Bricker & Squires, 1989; Field et al., 1978; Knobloch, Stevens, Malone, Ellison, & Risenberg, 1979). The Developmental Observation Checklist System (Hresko et al., 1994), the Kent Infant Development Scale (Reuter & Bickett, 1985), and the Infant Monitoring Questionnaires (Bricker & Squires, 1989) are currently available screening instruments and use caregiver report. Bricker and Squires (1989) report under- and overscreening rates with their instrument to be low and the minimal cost of the parent-completed questionnaire makes this option very attractive to systems with limited funds and personnel.

Due to limited funding and resources (Smith & Powers, 1987), paraprofessionals have begun to assume more direct roles in the provision of early intervention services (Baird, 1994). The professionals may have limited contact with the family and child and depend on parental and paraprofessional reports of the child's status and skills when planning intervention. Parental and paraprofessional reports, therefore, should be accurate. Professionals must use clinical judgment to reconcile what is reported with what is directly observed during the session. A good working relationship with the paraprofessional and parent would be beneficial to encourage open communication and sharing of observations and concerns.

The inclusion of parents early in their contact with intervention personnel sets a standard or expectation that parents can be involved in every stage of their child's services. Parental involvement will typically enhance the quality of the intervention experience for parents, their children, and the professionals.

Increased Involvement

Guralnick (1991) reports that family involvement has changed the face of early intervention. "Family involvement in programs for young handicapped children is essential" (Odom & Shuster, 1986, p. 68). After screening and eligibility determination, assessment for intervention purposes is the next step in the relationship the family will build with the early intervention personnel and program. Including parents early on in the process results in several advantages. First, the parent may become more comfortable with the early intervention personnel and their child's special need (Blacher-Dixon & Simeonsson, 1981; Lichtenstein & Ireton, 1984). This increased comfort may lead to the second advantage, which is that parents may be more willing to identify and work towards child development goals (Bagnato & Neisworth, 1991; Lichtenstein & Ireton, 1984; Squires et al., 1990).

Implementing intervention with a child should not detract from the joy a parent and child receive from playing with one another. Early inclusion of parents in service provision may lead to their continued involvement in their child's intervention. Early involvement can serve to heighten the parents' awareness of their child's development and provide opportunities for the professional to educate parents about child development. This education may influence a parent's ability to provide a nurturing environment for their child, one which may facilitate the child's ability to develop to his or her fullest potential. This involvement can give parents the sense they are doing all they can to help their child, which can build the parents' self-esteem if the interventions are successful. If not, the parent's view of themselves may suffer if they feel they were responsible for the failure. Therefore, the professional should be sensitive to the parents' reaction to their intervention efforts.

The family-centered philosophy respects and encourages family involvement in all aspects of the intervention process. One approach that incorporates this philosophy and builds on parental participation in early intervention is the family-centered consultation model mentioned earlier. This model places the parent in the central role of decision-maker for the assessment (Leviton et al., 1992). Parents may choose to conduct the assessment themselves with the support of the professional or observe the assessment, providing input as they see fit. The professional can monitor the parent's reaction to and satisfaction with the assessment by asking if the assessment process is progressing as planned. Integral to the assessment is the incorporation of the parent's observation of the child.

This sharing of information is important in building a working partnership between the professional and parent. Parents' view of their children's abilities can impact how parents respond to their children, whether or not the views are voiced. These views also may influence how the parent and professional respond to one another.

The Head Start program has effectively used parental participation for many years. As part of their requirements, they must include parents in decision-making for program planning and operations (McKey, Condelli, Ganson, Barrett, McConkey, & Plantz, 1985). Parents also may

be involved as staff. A study was completed regarding parental participation in Head Start suggesting parental involvement had a direct impact on the community (Kirschner Associates, 1970). Morris (1974) examined parental participation in five Head Start Centers. She found several factors that positively influenced parental participation. These factors included staff that had believed in parents and centers that sought active, rather then passive, involvement.

Influence of Parental Information and Participation on Relationships

Three relationships exist which can be affected by the parent's observations, information, and participation in early intervention. Two of these relationships are between the mother and her child and the child and environment; whereas, a third relationship results from the teaming of the parent and the professional.

Mother-Child Relationship

The mother's ability to estimate her child's developmental level can influence how she responds to her child (Sexton et al, 1985). For example, using the Neonatal Behavioral Assessment Scale (NBAS) (Brazelton, 1984), Widmayer and Field (1981) examined teenage mothers' response to observing the assessment of their healthy pre-term infants. Assessments were administered to the infants at 1-week intervals for the first month of life and then at 1, 4, and 12 months of age thereafter. Upon examination of the interactive patterns of the infants and their mothers, the researchers concluded that observing the assessments of their infants had influenced the mothers. It was hypothesized that observing had made the mothers more sensitive to and interested in their child's development and, therefore, more active in promoting that development.

The interactions between the mother and her child can influence the relationship they share, the child's future abilities, and the family (Beckman, 1984; Hunt & Paraskevopoulos, 1980). These interactions can possibly result in a self-fulfilled prophecy (Bagnato & Neisworth, 1991). If the mother views her child on a developmentally lower level than the child actually is, her interactions with the child may not be age appropriate. The child may not be exposed to opportunities to explore, experiment, and learn new skills. Such restrictions may create dependency in the child and reduce independent exploration of the environment.

Conversely, the mother might overestimate her child's abilities and again play with her child in a way that is developmentally inappropriate. The child may be faced with constant failure due to the child's inability to do what is expected and may become frustrated (Gradel et al., 1981). These two scenarios result in mismatches in the interactions between the child and the mother, which could result in frustration for both parties. Such frustration could lead to a decrease in interactions which could create problems in attachment.

A child's development does not occur in isolation. The environment, including people, influence development. The way a child reacts to the parent will influence how the parent responds to the child. The manner in which the parent responds to the child will influence how the child responds to the parent and a cycle is developed. This model has been discussed and studied by Sameroff and his colleagues (1990).

In summary, the parent's perception of the child's abilities is thought to influence how the environment is arranged. This arrangement will result in an environment for the child that is

either supportive, not challenging, or too challenging. Parent involvement in the child's assessment may change the way the parent views the child (Dinnebeil & Rule, 1994).

Child-Environment Relationship

Related to the idea of a mismatch in parent-child interactions is the relationship the child has with the environment. The mother may create an environment for her child built on her incorrect view of the child's abilities, which may affect the child's development (Bagnato & Neisworth, 1991). For example, the mother might provide interpersonal interactions that are not developmentally appropriate. This may result in the child decreasing the frequency of interactions. This lack of interaction may interfere with the child having the opportunity to learn from experiences (Hunt & Paraskevopoulos, 1980). Ideally, if the mother is involved in the screening and assessment process, she has the opportunity to learn about her child's development and may be more aware of how to provide the appropriate environment for the child to excel (Bagnato & Neisworth, 1991; Bricker & Squires, 1989; Gradel et al., 1981).

The third relationship that can be affected by parental information is the one between the parent and the professional. This relationship can be influenced by the amount of agreement they share and the professional's view of the parent's accuracy. The significance of this relationship has a strong influence on the effect early intervention has on the child's development and the way services are perceived by the family.

Parent-Professional Relationship

If one party views the other's opinions or observations as less than accurate, they may not value the other individual's input because they do not see that input as useful (Carey, 1981; Gradel et al., 1981). Friction can result from these misconceptions which make the working relationship difficult (Keith & Markie, 1969). These misconceptions can influence the amount professionals seek to include parents in the intervention process (Ireton, 1985; Shelton, 1989). Professionals may think parents are "in denial" of their children's delays because of the discrepancy in ratings. These misconceptions also may influence how much parents try to become involved. Parents may see their children display skills not seen by the professional in the assessment situation and resent having their views receive less importance. The tension in this type of relationship typically lessens the effectiveness of intervention by affecting the degree to which the parent values the professional's help and/or carries over the intervention into the home. This scenario can be avoided by discussing the similarities and differences noted in observations, the possible explanation for those differences, and what these differences might mean to intervention (Fleischer et al., 1990).

Another area affected in the parent-professional relationship is in gathering data on the child's progress. Valuable time might be lost in gathering data because the professionals do not accept the accuracy of parent's report of a child's ability and wait to observe a skill themselves. A better approach would be to include the parent in the assessment and intervention process. Actively involving the parents communicates to them that they are important (Bricker & Squires, 1989). However, if parental information on skill acquisition is to be used, then parents must be accepted as reliable estimators and observers of their child's performance (Rossetti, 1986).

In summary, the first part of this paper has addressed the importance of parental involvement in the assessment process. A family-centered philosophy has been presented that supports the inclusion of parents in their child's services. A discussion of four teaming models and the role parents are invited to take was discussed, as well as the importance of using multiple sources of information in assessing children. The impact of early intervention legislation, as it relates to parental involvement and their rights was presented. The cost effectiveness of using parents in screening and assessing their children and the possibility of parental involvement continuing in the provision of intervention was discussed. Lastly, the influence of parental participation on relationships was presented. In spite of this information, however, the question remains: "Why are there differences between parents' scores of their children's abilities and the professionals' scores?" Factors that may influence such differences between the scores are explored below.

FACTORS INFLUENCING PARENTS' OBSERVATIONS

Factors which may influence parental estimations leading to differences in agreement with a professional's scores of a child's development include: (a) adjustments parents make to their child's disability; (b) experiences parents have with their children or child-rearing (Gradel et al., 1981); (c) the age of the children (Jensen & Kogan, 1962); (d) the socio-economic status (SES) of the family (Sexton et al., 1985); (e) severity of the disabling condition (Jensen & Kogan, 1962); and (f) the assessment instrument used to obtain the parental report (Sexton et al., 1985). Encompassed in the experiences parents have with their children are two areas: the relationship parents share (Lederman & Blair, 1972), and the amount of time they have spent with their children (Hunt & Paraskevopoulos, 1980).

Adjustment to Disability

When a child with a disability is born into a family, the family may mourn the death of the child they expected to have (Bristor, 1984), or grieve for the child they believe they have lost (Berger, 1987). One of the problems the parents now face is caring for their actual child while they grieve the loss of their "perfect" child (Trout, 1983). Parents need to be given time to adjust to the birth of a baby with a special need and to grieve (Kubler-Ross, 1983). One way to facilitate this adjustment is to provide opportunities for the parent to talk with other parents of children with similar disabilities.

Parents seem to experience "stages of grief" as they work through their feelings of having a child with a disability. Kubler-Ross (1970) suggested 5 stages of grief: (a) denial and isolation, (b) anger, (c) bargaining, (d) depression, and (e) acceptance. The first stage manifests itself in denial of the existence of the disability and, possibly, the belief that the child will outgrow the disability. During the stage of anger, the parents may vent their anger on one another or the service providers. The third stage results in parents willing to bargain with the service providers to help their child be "normal". In the depression stage, the parents may seem to lose hope. Finally, in the acceptance stage, the family begins to accept their child, the situation their family now faces, enabling them to begin to cope. The professional needs to recognize that parents of children with disabilities will deal with their emotions in their own way. One cannot assume parents go through all of theses stages of grieving or that they will go through them in the same order. The professional may find Kubler-Ross's (1970) model useful in providing support to the family in a way that is comfortable for both parties.

The parent may be dealing with grief over the loss of a child for which high expectations were held (Chinn et al., 1978). A parent may have the same high but unrealistic expectations for their child with a disability. These high expectations may color parents' observations of their children's abilities so that they score their children as being able to do things they are not yet able to do. Lederman and Blair (1972) caution the professional in the use of parental information because parents are emotionally involved with their children, which may bias their report. Parents come to the professional with the hope they will be told there is something that can be done for their child and the professional will provide direction to help the child develop (Dembo, 1964).

Certainly, high expectations for a child are not completely detrimental. Parents will be responsible for their children for the rest of their lives. High expectations can sustain the parents' efforts and help them encourage their children to be the best they can be (Keith & Markie, 1969). These expectations, however, may influence the way parents estimate their children's abilities to the point that their scores are in disagreement with that of the professionals. Therefore, beliefs held about their children and adjustment to the disability are possible explanations for the difference in parental and professional observations of children's abilities. Another part of parents' belief system about their children is related to the various positive and negative experiences they have shared, which may influence their observations of their children's abilities.

Experiences with Child

In terms of experience with the child, the parent has a distinct advantage over the professional. Parents share a special relationship with their child, due to the time they have spent together and the bond that they share. Because of this relationship and experience, the parent may be able to motivate the child to do certain things the professional cannot motivate the child to do (Stancin et al., 1984). A parent also has had experiences and opportunities to observe the child in a number of settings and situations that the professional has not had the opportunity to do (Beckman, 1984, Lichtenstein & Ireton, 1984; Squires et al., 1990). Parents' report of the children's behavior may have more validity because of their opportunity to observe the children in different settings and situations (Lederman & Blair, 1972; Sexton et al., 1983; Sexton, Miller & Murdock, 1984). While professionals base their scores on what they see the child do during the assessment, parents have the advantage of considering a broad variety of times they have seen their children (Stancin et al., 1984). Parents will have a wider range of experience to draw from to score their children's abilities than the professional (Squires et al., 1990), which could create a discrepancy in the parents' and professionals' scores.

The Dakota Project (Kovach & Kjerland, 1986) is one example of a program that has included parents in the provision of early intervention services, both in assessment and intervention. The parents helped in describing their child's strengths and needs and the professional acted as consultant and collaborator to the parent. This project was successful in meaningfully involving parents in planning and implementing services for their children. Parents also indicated satisfaction with the program meeting their expectations of ideal services. An increase occurred in the parents' skills, knowledge, and confidence, as well as in their understanding of normal child behavior and problems (Kovach & Kjerland, 1986).

There are at least two areas in experience where the parent may be at a disadvantage when compared to the professional. One, the professional is more likely to have worked with many children with and without disabilities and is aware of developmental milestones with which to

compare the child's performance. Two, the professional has probably had a background of training in the use of assessments, as well as more experience in scoring a child's attempt on a graded scale. In essence, past experience with assessments can influence parental-professional congruency (Gradel et al., 1981). These two areas can impact the agreement between parent and professional observations.

Age of Child

Experience also may be influenced by both the child's and the parent's age, resulting in further discrepancy between the parent's and professional's estimates of the child's skills (Jensen & Kogan, 1962). Mothers' have been found to rate older children differently than did the teacher (Beckman, 1984; Gradel et al., 1981), and older mothers have been found to give slightly lower estimates of their child's social abilities than did the professional (Beckman, 1984). However, the child's age was not a factor in congruency of scores in a study by Sexton, Kelly, and Scott (1982). Mothers of older children were no more accurate in their observations than were mothers of younger children.

The difference seen in how mothers rate older versus younger children could be due to the amount of time a parent has had to spend with their child. With older children, the mother has had more opportunity to develop a broader base of knowledge regarding the child's abilities. The advantage mothers have with reporting younger children's skills, however, is that they have observed fewer milestones and may be able to better report the child's abilities.

Gender

The gender of the child also appears to be an element in the congruency of a parents' and professionals' scores. In two separate studies, findings showed that mothers scored their sons higher, in comparison to the teachers' scores. No significant difference was reported in the way the mothers and teachers rated the females (Blair, 1970; Stedman, Clifford, & Spitznagel, 1969).

Socio-Economic Status

The parents' socio-economic status also may influence their ability to score the child's skills in a manner that is congruent with a professionals' scores. In studies that examined this variable, mothers' income was found to significantly affect the amount of congruence between the parents' and the professionals' scores. Mothers from families with a higher socio-economic status showed more congruency with professionals (Sexton, Miller, & Murdock, 1984; Sexton et al, 1985).

Severity of Disabling Condition

The severity of the disabling condition may be a factor in parents' ability to score their children objectively (Jensen & Kogan, 1962). Bagnato and Neisworth (1981) reported that parents of children with severe disabilities are more accurate in scoring their children's status than parents of children with milder disabilities. One would reason that a more severe disability may result in a limited repertoire of behaviors for the child, thus providing the parent with fewer child skills and developmental milestones to report.

Assessment Instrument

Several researchers have suggested criteria for the assessments chosen when requesting information from the parent (Sexton, Miller, & Murdock, 1984; Stancin et al., 1984; Umansky, 1983). These include: (a) selecting objective measures (Umansky, 1983), (b) avoiding value-laden responses (Blacher-Dixon & Simeonsson, 1981, (c) presenting development on a continuum (Bagnato & Neisworth, 1991; Borg & Gall, 1983; Wolfensberger & Kurtz, 1974), and (d) providing adequate directions (Borg & Gall, 1983). Two additional criteria which may be helpful in promoting parent and professional congruency are the discussion of obtaining ceilings in assessments and asking for current developmental information versus recollection of past events.

Many tests require that ceilings be established. The ceiling is that level above which the child is not expected to succeed, due to his/her age. Parents may be troubled to see their children not successfully complete test items, especially if the parent is asked to score the child. Therefore, parents may need to know that there are some test items their child is not expected to pass (Bayley, 1993; Lederman & Blair, 1970; Linder, 1990).

Accurate recollection of current events may be the easiest information to obtain from parents (Lichtenstein & Ireton, 1984). Asking a parent to recall when their child reached specific earlier developmental milestones also may influence the accuracy of their report (Umansky, 1983). Memory of earlier events may have faded with time. The parents also might confuse one child's development with another and provide an inaccurate report.

In summary, there seems to be several factors that may influence the parent's observations of the child's abilities and impact parental and professional congruency. These factors have been discussed and include adjustment to the disability, experiences with the child, age and gender of the child, socio-economic status of the family, severity of the disabling condition, and the assessment instruments used to obtain information about the child from the parent. What follows is a discussion of the factors that may influence the professionals' observations of the child.

FACTORS INFLUENCING PROFESSIONALS' OBSERVATIONS

Factors exist which may cause the professional's scores to be different from the parent's to such a degree that a discrepancy results. These factors include: (a) attitudes, (b) professional knowledge, (c) experience with the child (Keogh, 1972; Sexton et al., 1982), and (d) the assessment instrument (Gradel et al., 1981).

Attitudes

The attitudes of professionals can create bias in their scores. This bias could be toward a child's disability, race, gender, socio-economic level, or other factors. Perhaps the professional has worked previously with a child who had the same type of disability as the child currently being evaluated. The professional might project onto the child being assessed some of the same abilities and attributes of a child from the professional's previous experiences. Rather than scoring what the child does, the professional may be influenced by beliefs regarding what a child with this disability could do from past experience. When this results in a more positive assessment of the child's abilities, it is referred to as the halo effect (Sattler, 1988). In this situation, the child's scores could be negatively affected by the professional's bias.

Regardless of where this prejudice originates, responding to stereotypes in assessment may bias the scores and likely make them inaccurate. For this reason, professionals should be vigilant to remain objective about their work, being aware of any prejudices they may hold about their clients and monitoring these feelings.

Professional Knowledge

An additional component of the assessment picture is the professional's use of clinical judgment, a skill developed through education and experience in working with children with disabilities. These experiences provide professionals with a basis for comparison upon which they can draw.

A part of being a professional is seeking to stay abreast of new information in the field and to hone those skills necessary to maintain "best practice". Best practice encompasses the procedures recommended by the professional's field that provide the highest quality services. In the area of assessment, best practice might include: (a) establishing and maintaining interrater reliability, (b) using an assessment often to remain proficient (Sattler, 1988; Shelton, 1989), (c) practicing administration of an assessment beforehand to become familiar with the instrument (Borg & Gall, 1983; Sattler, 1988), and (d) exploring the use of new assessments that might better fit the needs of the practice. These activities are unique to professionals and can influence their proficiency in assessment. Parents are not likely to pursue knowledge about assessment in such a broad manner. Parents' focus typically rests upon their child's specific needs.

Another factor unique to professionals is the constraint placed on them by the very fact that they are a professional. Federal law (P.L. 94-142, 1975) requires the use of standardized instruments to determine eligibility for early intervention services (Bailey & Wolery, 1989). The use of a standardized instrument in assessment will influence the professional, as discussed later in the paper. This requirement to use a standardized assessment does not preclude the use of other types of instruments to gather information. In fact, Public Law 94-142 (1975) mandates that more than one source of information be used in determining a child's eligibility for services. The call for the inclusion of parents in the provision of early intervention services is clearly stated in Public Law 94-142 (1975), Public Law 99-457 (1986), and Public Law 102-119 (1991). This legislation also impacts the professional.

Experience

Experience falls into two categories: (a) experience with the child being assessed, and (b) experience with the assessment instrument. Experience with the child being assessed can be both a disadvantage and an advantage for the professional. The disadvantage lies in the limited amount of time the professional may have had with the child being assessed (Sexton et al., 1982). Naturally, the parent is the one person who has probably spent the most time with the child. Professionals typically see the child in very few settings and on very few occasions. This limits the professionals' experience with the child and their ability to document the full range of the child's abilities (Keogh, 1972).

This lack of experience is unfortunate, because professionals have traditionally had the primary responsibility for completing the assessment process unless the instrument specifically provides for parental report. This limited contact, however, can be an advantage to the professional when administering standardized instruments which require professionals to score only what they see

the child doing during the assessment, unless parental report is allowed. Scoring beyond what is actually seen during the evaluation is inappropriate for standardized measures, but can provide helpful information when setting functional goals. Parent's may provide this helpful information.

Another advantage for the professional is in having experience with the assessment instrument. This experience is valuable in increasing the reliability and validity of the assessment and the assessment results. Professionals should have had extensive opportunities to familiarize themselves with the manual and to be aware of the scoring procedures and descriptions of behaviors to be observed. This information will help professionals in making scoring decisions during the assessment. When compared to parents, professionals typically have a wider range of experience in assessing children which may increase their accuracy (Lederman & Blair, 1972).

Assessment Instrument

The assessment instrument or measure, itself may influence the professional's ability to adequately assess the child in the following ways: (a) instrument familiarity, (b) predictive validity, and (c) assessment constraints (Gradel et al., 1981). The professional's familiarity with the instrument may influence the scores obtained (Shelton, 1989). Professionals should have a good grasp of the instructions, administrative and scoring procedures, as well as basal and ceiling rules of the assessments they use regularly. Unfamiliarity with any of these areas can result in the test being given in a non-standardized fashion, which can affect the validity of the results.

The predictive validity also may influence a child's assessment results. The predictive validity of the standardized measures currently available in the field of early intervention is limited (Widerstrom, Mowder, & Sandall, 1991). Some of the factors that contribute to this problem are that the children evaluated are young and their neurological system is not yet mature. This immaturity typically limits the array of responses that they are capable of making (Widerstrom, et al, 1991). Young children typically do not have long attention spans and require frequent reinforcement to remain motivated (McCune, Kalmanson, Fleck, Glazewski, & Sillari, 1990). They often are apprehensive of strangers and strange situations and may not perform well under these conditions. Unfortunately, these are usually the conditions under which standardized assessments are frequently conducted.

The constraints of the assessment may affect scores as well. With standardized measures, professionals are limited in the modifications they can make and still maintain the validity and reliability of the test. For example, when administering the Bayley Scales of Infant Development: Second Edition (BSID:II) (Bayley, 1993), the examiner can allow the parent's help in administering a test item only if the administration procedure permits. Professionals often cannot reinforce or encourage the child for successes beyond a word or two. The items or toys used during the test may be standardized so that the same set of toys, and only these toys, are used with this assessment. The order and method of presentation may be standardized as well, to insure that the instrument is given in the same manner each time it is administered. Consequently, the professional may be prohibited from prompting the child beyond what the instructions allow or using toys familiar to the child. For these reasons, Dinnebeil and Rule (1994) suggest the use of standardized assessments as the measure against which parental judgments are made may provide misleading results because the child's best effort may not be seen.

The inclusion of parental information in the assessment battery usually takes the form of nonstandardized efforts (e.g. anecdotal information, developmental milestones, checklists). The validity and reliability of these efforts also is limited, but they have their place in providing a format for parents to provide information about their child. Factors exist which may influence the observations of the professional. These are the attitudes and experience, professional knowledge, and the assessment instrument. The professional should be aware of the impact these areas may have on their assessment results.

In summary, inclusion of parents in the provision of services to children with disabilities should be a point of pride for the field of early intervention. Parental participation has been mandated through legislation and recommended as best practice. Parental involvement can begin with referral and include screening, assessment, program planning, intervention, and program monitoring. The professional would be well served to capitalize on this resource to improve the services provided. The professional must seek to know parents, communicate respect for their views, and provide a climate in which they feel comfortable to participate. The professional can then work with the parent in developing their working relationship with both parties assuming participatory roles.

IMPLICATIONS FOR BEST PRACTICE

> *Decisions that have a major impact on children, such as enrollment, retention, or placement, are not made on the basis of a single developmental assessment or screening device but consider other relevant information, particularly observations by teachers and parents.* [italics added] (Bredekamp, 1987, p. 13).

Provision of family-centered services has been presented as best practice in the field of early intervention (Bailey et al., 1992). Best practice implies that the intervention will be developmentally appropriate. Developmentally appropriate practice, in early childhood special education, also calls for assessment information to be obtained from various sources, including the parents. The assessment information should be gathered across various settings, providing an opportunity for the parents to report how their child functions, for example, at home and at the store (Carta, Atwater, & McConnell, 1991; McLean & Odom, 1993). Legislation has invited parents to be more involved in the early intervention services that their children receive. Clearly, legislation is intended to empower parents to step forward and be an advocate for their children. Parental participation can occur in programs through the support of professionals and the interest of parents. Professionals and parents have separate responsibilities in this process.

Professional Roles

Professionals and the agencies for whom they work with have responsibilities if parental participation is to occur. The actions of professionals' as they elicit and facilitate parental participation in early intervention are influenced by the professionals' belief system and discussed in the next section.

Individual

The individual professional has the opportunity to create an atmosphere in which parents' opinions are welcomed and respected. To create this atmosphere, the professional should: (a)

value parents, (b) commit to parental participation, (c) help the parent feel comfortable, and (d) be sensitive to the parent. First, the professional must value parents and believe that their involvement in the service process will be of benefit not only to the parents, but to the program and all others involved (e.g., child, professional). Second, the professional must commit to this parental participation policy of best practice and be willing to learn not only how to involve the parents in each early intervention step, but also to accept the degree to which the parent desires to participate. Third, the professional must help parents feel comfortable with the program, which, of course, may increase their willingness to participate and provide their input and honest opinions. For example, if parents are asked to complete an assessment on their own, the professional should be sensitive to the parents' literacy skills. Finally, the professional must be sensitive to the parent's level of interest in participation and the ability to commit to involvement in important service delivery responsibilities. These (and other) professional responsibilities will likely influence the workplace and require the agency's support.

Agency

Not only must the individual professionals commit to including parents, the agencies that employ the professionals to provide the early intervention services must commit to inclusion. Commitment to a family-centered approach may require a change in the professional's roles and may influence the agency's philosophy (Leviton et al., 1992). A professional's role may change to that of consultant or primary liaison between the agency and the parent (Trivette, Deal, & Dunst, 1986). Parental participation also requires the support and commitment of the agency in its policy, procedures, philosophy, and documentation (Pearl, 1993). The professional and the agency are not the only factors to consider. Efforts on their part will help the parents to assume roles in the service delivery process.

Parental Roles

Just as there are responsibilities for the professional and the agency, responsibilities also exist for the parent, which the parent may or may not assume. This author suggests six roles the parent might play in the early intervention process. These are: (a) information provider, (b) facilitator, (c) decision-maker, (d) service coordinator, (e) interventionist, and (f) team member.

Information Provider

As information provider, the parent participates in the assessment by giving background and developmental information about the child. The parent may be an excellent resource for obtaining accurate and thorough descriptions of the child's abilities (Bagnato & Neisworth, 1991; Lichtenstein & Ireton, 1984; Shelton, 1989). A critical matter to consider, however, is that this may be the first occasion that the parent has had to face the fact his or her child has a developmental delay. All the disappointing or discomforting ramifications of this disclosure may need to be addressed. The professional therefore should be prepared to comfort and possibly counsel the parent. Also, the parent may need to be referred to a support group or another parent who has a child with a similar disability (Turnbull & Turnbull, 1990).

Being an information provider also requires a good memory of the child's development so that the parent can make an accurate report. The professional can assist the parent in this time of disclosure by creating a comfortable atmosphere and informing parents ahead of time that they

will be asked to describe their child's abilities. Parents may wish to bring a baby book or talk with other family members about the child, in order to help them provide a more complete picture of their child's development.

Facilitator

As facilitator, the parent may interact with the child to elicit the best performance. Facilitation may occur during the assessment, and possibly, therapy or intervention sessions. The parent may need to comfort the child or elicit the child's cooperation with the task required. These two duties can be invaluable to the professionals working with the child.

Decision-Maker

As decision-maker, the parent has the responsibility and right to make decisions in their child's early intervention. The parent needs to be willing to seek all options, weigh them, take suggestions, make the decision, follow through, evaluate, and make modifications, as necessary. Professionals can assist parents in this role by educating them about their options. For example, parents' decisions may become easier to make when they are fully aware of all their options. A central resource directory providing information on all early intervention programs in the area and the contact person for those programs, may be of assistance if the parent is considering seeking services elsewhere. A clear description of the programs' services should be provided to help in this decision.

Service Coordinator

As service coordinator, the parent has the opportunity to integrate the various services his or her family may access. The parent should seek to be aware of: (a) the services available, (b) the person to contact for the services, and (c) strategies necessary to coordinate those services. Parents are at a distinct advantage in this role of scheduling the different services because they know their own schedule and the times when their child is at his or her best. Acting as their child's service coordinator also can serve to empower the family. Nevertheless, coordination of services can be difficult for the parent because of the numerous contacts to be made and the time involved (Able-Boone, Sandall, Loughry, & Frederick, 1990). The professional can help by making introductions to the contact person in the other programs.

Interventionist

As interventionist, the parent may work to help his or her child develop skills. The parent may be asked to incorporate intervention goals into daily routines or to take time from their schedule, which may already be hectic, to do intervention. Parents need to pay close attention to how the intervention is done and be willing to ask for clarification from professionals regarding their implementation of the intervention. Of course, the parent has the option not to act as their child's formal interventionist.

Another factor to consider as interventionist is that the parent will take on the added role of teacher to the child, which may influence the role as parent. By committing to teaching their children, parents will likely sacrifice something to make room for the teaching time in their

schedule. Therefore, the professional needs to be especially sensitive to the parents' level of ability and stress, as it relates to the responsibility of being an interventionist.

Team Member

As a team member, the parent may participate in the early intervention process. The parent role may be to interact with the child to encourage the best performance, provide information about the child, or simply be a comforting presence for the child during the assessment.

Professionals can assist parents in preparing for the assessment meeting by offering a parent report questionnaire which can help them organize their thoughts. This type of checklist frequently addresses domains of development and may include areas not typically observed during a formal assessment, such as feeding, dressing, and self-care skills (e.g. Developmental Observation Checklist System). The inclusion of this type of information can be valuable to the assessment process. An explanation of the assessments used and a description of what will be observed can help the parent prepare for the session as well.

In summary, professionals, agencies, and parents are faced with several opportunities to influence the amount of participation the parent will have in a child's early intervention program. The professional and the agency can create an atmosphere conducive to parental involvement. Parents may assume a part as information provider, facilitator, decision-maker, service coordinator, interventionist, or team member. These six roles in no way fully describe all the responsibilities by which parents can be involved in early intervention services for their children. Rather, the roles simply provide a framework for the parent and professional and suggestions for ways in which the professional can facilitate parental involvement in early intervention services.

Besides the roles for the professional and the parent, a third area that can influence the accuracy of parental report is the assessment instrument. The responses elicited and the assessment instruments can impact the parent's ability to respond accurately. Thus, the professional should be cognizant of the type of responses elicited and their limitations.

Response Considerations

The type of responses required by the assessment instrument can have a negative impact on the congruency between the parent's and professional's scores. The influence of type of responses can be avoided by not using those instruments that increase the discrepancy between the parent's and professional's assessment results. If not using the assessments is not an option, the professional should be aware of the influence of type of response may have on the parent's ability to report the child's skills.

Value-Laden Responses

One type of response that may influence a parent's ability to respond is described as value-laden and is defined as one which results in worth being assigned to an item (Blacher-Dixon & Simeonsson, 1981; Wolfensberger & Kurtz, 1974). When a parent must report that the child has not performed a certain skill or reached a specific developmental level, the parent may experience a heightened level of awareness of the discrepancy between the child's current performance and age-appropriate abilities. Awareness of the discrepancy may be discomforting to the parent. The

realization that the child is developmentally delayed can be avoided by policing the wording of the evaluations parents are asked to complete.

Either-Or Responses

Another area to consider in choosing an assessment instrument is to avoid having the parent make "either-or" responses. This type of response implies that there are only two choices a parent can make in describing the child's abilities. For example, an item that reads, *"Does your child walk or crawl to move about?"* would not address those children who move in other ways, such as a wheelchair, rolling, scooting, or other means. A parent may then choose the response that most closely describes the child without completely or accurately describing the child's abilities. Open-ended questions or providing several descriptions of possible behaviors can avoid this type of problem (Bagnato & Neisworth, 1991; Borg & Gall, 1983).

Conversely, Glascoe and MacLean (1990) suggest that true/false or multiple choice questions would facilitate a parent's task of describing their child's abilities. This conclusion was drawn from an analysis of results of a developmental interview parents were asked to complete on their children. Discrimination and comparison were two methods parents seemed to use to determine their child's developmental level--skills used with "either-or" questions. This discrimination and comparison occurred when the parent used another child who was developing normally to judge the adequacy or inadequacy of their child's development.

Assessment Considerations

Related to the type of responses is the assessment instrument in possibly influencing the parent's ability to accurately report the child's development. Using objective assessments and discussing their use and what to expect from them are strategies professionals can employ to help the parent.

Subjective/Objective Measures

A program also should avoid subjective assessment instruments that rely on parental perceptions, judgments, and memory to describe the child. Objective measures that have the behaviors clearly described seem to be easier for parents to complete (Umansky, 1983). Clear instructions should be given, both written and oral, with examples to illustrate the question (Borg & Gall, 1983; Lichtenstein & Ireton, 1984). The wording of the behavior descriptions should be objective so that the parent and professional are in agreement regarding the behavior being discussed (Shelton, 1989; Squires et al., 1990). Parents should be encouraged to describe what their children do at home and in other settings. Scoring what children are capable of doing, but have not demonstrated should be avoided.

Testing Limits

Seeing their child fail to successfully complete a test item may be disconcerting to a parent. The professional cannot easily manipulate administration of a standardized assessment to avoid this situation. While observing the child's failure may not influence the parent's judgments of the child's ability, it seems best practice would dictate educating the parents about the assessment. The professional can inform the parents that during formal assessment that their child may be asked to demonstrate their full range of abilities, including some tasks which are too easy for the

child and some tasks that are beyond the child's developmental or chronological age. This is done to determine the basal and ceiling on standardized tests. The basal is that level at which the child consistently receives credit for items and below which the child is expected to succeed at all items. Parents should be informed that a ceiling is the level at which a child consistently fails and, it is assumed, will continue to fail, indicating his or her full abilities have been tapped. Knowing their child is not expected to pass some items may reduce a parents' fears when they see their child failing (Bayley, 1993; Lederman & Blair, 1972; Linder, 1990).

In summary, what has been presented in this section are suggestions for ways in which the professional and program may elicit parental participation in early intervention services and promote parental and professional congruency. Parental information should be viewed as valuable, especially if parents are asked the right questions (Rossetti, 1986). However, a reduction in discrepancy between observers is not necessarily the goal in child assessment. While similarities and differences in parental and professional observations may occur, an examination of these discrepancies can result in a more complete picture of the child and assist in planning intervention (Fleischer et al., 1990).

ANALYSIS OF THE STUDIES

Analysis of the studies included in this paper have supported the premise that participation in the provision of early intervention services is: (a) considered to be best practice (Bailey et al., 1992), (b) mandated by legislation (P.L. 94-142, 1975; P.L. 99-457, 1986; P.L. 102-119, 1991), and (c) could be beneficial to the parent, child, and professional. Factors exist that seem to influence the observations of parents and professionals and, by extension, the congruency between their ratings. These factors were discovered after examining the results of the research. Factors influencing parents are (a) adjustment to disability, (b) experiences with child, (c) age of child, (d) gender, (e) socio-economic status, (f) severity of disabling condition, and (g) assessment instrument. The critical factors influencing observations by the professional included (a) attitudes, (b) professional knowledge, (c) experience, and (d) assessment instrument.

Three questions arise from the review of the literature when examining the area of accuracy and parental-professional congruency in assessment. The first question is whether the difference in parental and professional scores are related to the parent's accuracy or the professional's ability to elicit the best sample of a child's skills? Second, are we providing situations that let parents report information about their children to the best of their ability? Third, is it always best for different observers to agree in their observations?

The constraints of standardized assessments have been discussed earlier, as well as the influence of the assessment on parental and professional congruency. When disagreement in scores occur between the parent and the professional, is the discrepancy a function of parent over- or underestimating the child's abilities when compared to the score the professional obtains using a standardized measure? Could another likely explanation be that the disagreement between scores is a reflection on the professional's ability to develop rapport with the child and the standardized instruments' limitations? If the latter is the case, parental information could possibly be used by the professional in arranging the formal assessment environment and, possibly, choosing a better instrument to tap the child's full range of abilities.

Are we providing situations that let parents report information about their children to the best of their ability? A partial answer to this question can be found in the first part of this paper in the explanations for the differences in scores between the parent and professional. Could it be that parents are as accurate in their observations of their child as they are capable of being? If the professional does not describe the behavior about which they are questioning the parent, the parent is limited in their ability to answer the question accurately. The professional also can assist the parent by asking for complete descriptions of the behaviors that the parent reports their child doing and the situations in which these behaviors occur. These efforts and others described in this paper can limit misunderstandings viewed as inaccuracies in observations.

Third, is it always best for different observers to agree in their observations? Could the disagreements that occur lead to discussion resulting in a more complete description of the child? These disagreements also might lead to areas of intervention. If professionals approach disagreements in observations between themselves and the parents as an opportunity for discussion and not contention, resolution of or respect for differences might be reached. Another possibility is that the two parties will not agree but will be able to explain why the differences in observation occurred. In either case, the observations of the other party should be respected.

Parents and professionals do differ in their observations of children with disabilities and the differences are not always detrimental. Professionals can seek to reduce the influence of factors that seem to create discrepancies between themselves and the parent. It is important, above all, to continue to include parents in the delivery of early intervention services to their children to the extent that the parents are willing, able, and interested.

SUMMARY OF THE STUDIES

This paper has examined the role of parental participation in the assessment process, including family-centered philosophy, teaming models, multiple sources of information, legislative issues, cost effectiveness, and increased involvement. The influence of shared information in the assessment on relationships also has been discussed. The factors which may influence parental and professional congruency were presented. "Best practice " implications, including roles for the professional and the parent, were discussed, as well as response and assessment considerations. Lastly, an analysis of the studies was presented. What follows is a synthesis and critical analysis of 20 studies that examined the agreement between parental and professional observations of children's performance.

Criteria of Studies

The studies were chosen using the following three criteria:

- the subjects in the studies had a diagnosed special need (not specified or specified disorder) or risk for developmental delay,
- the subjects in the studies were primarily children birth through 6 years old, with 9 studies included having children up to 9 years old, and
- the assessments used to obtain the scores the parent and professional provided were objective.

Subjects' Special Need

Of the 20 articles reviewed, the subjects included in the studies divided into the following categories: (a) children with a diagnosed special need, and (b) children with a risk for developmental delay (respiratory distress disorder, at-risk for learning disability, premature birth, and disadvantaged). Children with a diagnosed special need were then further divided into the categories of not specified and specified disorders. Not specified disorders included: mild to severely disabled, multi-handicapped, or no information given. Specified disorders included: mental retardation, developmental delay, Down Syndrome, cerebral palsy, autism, orthopedically impaired, health impaired, speech/language impaired, and genetic disorder.

Though 20 articles were reviewed, three articles (Bricker & Squires, 1989; Field et al., 1978; Stancin et al, 1984) had two (2) part studies. Each of these three articles used the same data pool for both of their studies with the number of subjects varying from study one to study two. The number of studies using subjects by the categories listed above included: (a) diagnosed special need, not specified 4/20 (20%) and specified disorders 10/20 (50%), and (b) risk for developmental delay 6/20 (30%). Sexton et al. (1982) provided percentages for the different disabilities of their subjects.

Three studies either omitted information about the disabilities or were not specific in their description of the disabilities (Gradel et al., 1981; Meltzer, Levine, Hanson, Wasserman, Schneider, & Sullivan, 1983; Sexton, Hall, & Thomas, 1984). A listing of the special needs for each study is included in Appendix A under the subjects' column.

Subjects' Age

The age criterion for this analysis was initially chosen since the intended focus was the early childhood ages. Though most of the children in the studies were between the ages of birth to 6 years, some studies had children above the 6 year cut-off. The studies divided into four categories: (a) birth to 6 years (8/22 studies or 36%), (b) birth to 6 years and above (8/22 studies or 36%), including children up to 9 years of age, (c) only mean age reported (5/22 or 23%), and (d) age not reported (1/22 or 5%). Twenty-two studies are reported as the data pool since two of the studies had two parts. Hanson et al. (1979) did not specify the ages of the children used as subjects, describing them only as "infants". Appendix A provides the ages of the children included in the studies.

Studies' Assessment Instrument

Objective measures were divided into two groups. Those measures used to gather data from parents (e.g. Mother's Assessment of the Behavior of Her Infant) and those used to gather data from professionals (e.g. Bayley Scales of Infant Development). The measures used with parents were divided into those completed by the parent (e.g. Infant Monitoring Questionnaire) and those given in an interview format (e.g. Preschool Attainment Record). The measures completed by professionals were divided into the groups: (a) standardized, (b) not standardized, (c) criterion-referenced, (d) curriculum-referenced, and (e) interview schedule.

Table 1

Instruments Used to Gather Information from Parents

TYPE OF INSTRUMENT	SOURCE	N●
PARENT COMPLETED		
Age Independence Scale	Keith & Markie, 1969	1
Carolina Record of Infant Behavior (CRIB)	Simeonsson, 1979	2
Examiner-made Checklist	Hanson et al., 1979; Knobloch et al., 1979; Meltzer et al., 1983	3
Family Resource Scale	Dunst & Leet, 1987	1
Infant Monitoring Questionnaire	Bricker & Squires, 1989	1
Kent Infant Developmental Scales (KIDS)	Katoff et al., 1980	1
Mother's Assessment of the Behavior of Her Infant (MABI)	Field et al., 1978	1
Parenting Stress Index	Abidin, 1986	1
Toddler Temperament Scale	Blacher-Dixon & Simeonsson, 1981	1
INTERVIEW SCHEDULE		
Alpern-Boll Developmental Profile (DP)	Alpern & Boll, 1972	2
Developmental Profile II (DPII)	Alpern, Boll, & Shearer, 1980	2
Modified Bayley Scales of Infant Development	Gradel et al., 1981	1
Modified Learning Accomplishment Profile-Diagnostic Edition	LeMay, Griffin, & Sanford, 1977	3
Modified Learning Accomplishment Profile	Sanford, 1974	1
Modified McCarthy Scales of Children's Abilities	Gradel et al., 1981	1
Preschool Attainment Record (PAR)	Doll, 1967	3
Infant Temperament Questionnaire●●	Carey, 1970	2

● = number of times the instruments were used in the studies reviewed
●● = It was not clear if the parent completed the measure or was interviewed.

Table 2

Instruments Used to Gather Information from Professionals

TYPE OF INSTRUMENT	SOURCE	N●
STANDARDIZED		
Bayley Scales of Infant Development (Bayley)	Bayley, 1969	5
McCarthy Scales of Children's Abilities (McCarthy)	McCarthy, 1972	2
Stanford-Binet Intelligence Test	Thorndike et al., 1985	1
NON-STANDARDIZED		
Brazelton Neonatal Scale (Brazelton)	Brazelton, 1973	1
Kindergarten Performance Profile	Swartz & Walker, 1984	1
Metropolitan Readiness Test (portions)	Lederman & Blair, 1972	1
Pediatric Examination of Educational Readiness	Levine, Oberklaid, Ferb, Hanson, Palfrey, & Aufseeser, 1980	1
CRITERION-REFERENCED		
Battelle Developmental Inventory	Newborg, Stock, Wnek, Guidubaldi, & Svinicki, 1984	1
Gesell Developmental and Neurologic Examination (Gesell)	Knobloch, & Pasamanick, 1974	1
Modified Learning Accomplishment Profile	Sanford, 1974	1
Revised Gesell and Armatruda Developmental and Neurologic Examination	Knobloch et al., 1980	1
CURRICULUM-REFERENCED		
Early Intervention Developmental Profile	Rogers, Donovan, D'Eugenio, Brown, Lynch, Moersch, & Schafer, 1981	1
INTERVIEW SCHEDULE		
Alpern-Boll Developmental Profile (DP)	Alpern & Boll, 1972	3
Learning Accomplishment Profile-Diagnostic Edition (LAP-D)	LeMay et al., 1977	3
Modified Learning Accomplishment Profile-Diagnostic Edition	LeMay et al., 1977	3
Preschool Attainment Record (PAR)	Doll, 1967	3

● = number of times the instruments were used in the studies reviewed

Rating of Studies

This review rated the studies in several areas, including (a) the purpose, (b) subjects, and (c) assessment instruments. Each of these areas was further divided into subsets. A rating was devised by this author and completed to critically analyze the studies and provide a method of comparison, as well as a means by which to judge them. A criterion was established for each areas' subsets that corresponded with the rating of "+", "0", or "-". All 20 studies were rated in this way by the author of this paper.

Purpose

In the area of purpose, the subsets of "clarity of purpose" and "accomplishment of purpose" were rated. To receive a "+" rating in these subsets, the study numbered the purposes and the numbers corresponded with the results. A rating of "0" was given if the purposes were embedded in a paragraph or the results did not correspond with the order of reporting in the discussion section. If the purposes of the study, both in introduction and in discussion, were not easily found, a "-" rating was given.

Seven of the studies (Blacher-Dixon, 1981; Bricker & Squires, 1989; Field et al., 1978; Gradel et al., 1981; Schafer et al., 1987; Sexton et al., 1982; Sexton et al., 1990) clearly labeled and numbered their purposes. In four out of the 20 studies, the purpose was not easily found (Knobloch et al., 1979; Sexton et al, 1985; Stancin et al., 1984; Stedman et al., 1969). Those same 4 studies and one other did not clearly state whether or not the purpose was met (Sexton, Miller, & Murdock, 1984).

Subjects

For the area of subjects, the subsets of selection, sufficient number, and representativeness were rated. In subject selection, if the subjects were reported to be matched, randomly selected, or volunteers the study received a "+" rating. If the study did not report how the subjects were selected, a rating of "-" was given. No rating of "0" was assigned because subject selection could either be reported or not; there was no in-between. To rate sufficient number of subjects, a value of "+" was given if the study had 41 or more subjects. A value of "0" was assigned if the study had between 21 and 40 subjects. To receive a "-" rating, the study had less than 20 subjects. In rating the representativeness of the subjects, the inclusion of information about race, gender, disability type, and whether services were home- or center-based was noted. If the study indicated two of these, it received a "+" rating. A rating of "0" was given if the study listed only one of the areas and a "-" rating was assigned if none of the above areas were mentioned.

Only two of the studies (Meltzer et al., 1983; Sexton, Miller, & Murdock, 1984) described their subjects as volunteers. Stancin et al.'s (1984) study matched their subjects. Five of the studies had 20 or less children as subjects, six of the studies had between 21 and 40 children as subjects, and the remaining 10 had 41 or more children as subjects. The range of number of subjects in all the studies analyzed was 11 (Hanson et al., 1979) to 526 (Knobloch et al., 1979). Notice the small number of subjects used in the majority of the studies. Of the ten studies with 41 or more subjects, six of those had between 52 and 75 subjects. The small number of subjects used could impact the power, significance, and the generalizability of the research findings.

Again, to measure the representativeness of the subjects for the analysis, the study had to indicate at least two of the following: race, special need, gender, and type of program. Fourteen of the data pools did include at least two of the pieces of information listed above. Six of the data pools (Bricker & Squires, 1989; Field, et al., 1978; Stancin et al., 1984; Stedman et al., 1969) provided information on one of the areas listed above. Two of the data pools (Knobloch et al., 1979; Sexton, Hall, & Thomas, 1984) had none of the information listed above. Gender and special need were the most common descriptors provided. Two studies used the same data pool (Sexton, Miller, & Murdock, 1984; Sexton et al, 1985).

Assessment Instruments

The area of assessment instruments had the subsets of validity, reliability, trained administrators, blind administrators, and modifications. A value of "+" was given for validity and reliability of the assessment instrument(s) if the author(s) used other studies to support their chosen instrument(s). To receive a value of "0", the validity and reliability of the instrument was reported by information from its manual only. If validity and reliability of the assessment was not discussed, a value of "-" was assigned.

Regarding the administrators of the assessments in the studies, a value of "+" was assigned if their training was discussed and if the administrators were blind to other results when giving their assessments. If the words "trained", "certified", or "blind" were used in reference to the assessment administrators or was implied, the study received a value of "0". If these areas were not discussed, a value of "-" was given.

For the subset of modifications, a value of "+" was given if the assessment instruments were not modified. Modifications in the assessments could influence the measures' reliability and/or validity. If modifications were made but validity and reliability was established with the modified version, a value of "0" was given. If validity and reliability was not established with the modified version of the assessment, a value of "-" was assigned.

Eight of the studies (Beckman, 1984; Blacher-Dixon & Simeonsson, 1981; Bricker & Squires, 1989; Knobloch, et al., 1979; Schafer, et al., 1987; Sexton, et al., 1983; Stancin, et al., 1984; Stedman, et al., 1969) addressed support for the measures chosen, usually giving one or two sentences about the measure's popularity or use. Stancin et al., (1984) provided an example for supporting the measure chosen by giving information about the Kent Infant Development Scale (Katoff, et al., 1980) and addressing reliability and validity. Scoring was described and related survey information provided about this assessment. This information served to more completely describe the assessment instrument.

Three studies addressed the validity and reliability of at least one of the measures used in their research by citing other studies (Beckman, 1984; Schafer et al., 1987; Sexton et al., 1990). Four studies reported the validity and/or reliability of at least one of their measures by citing the manual (Keith & Markie, 1969; Lederman & Blair, 1972; Sexton et al, 1985; Stancin et al., 1984). Fourteen studies (e.g. Blacher-Dixon & Simeonsson, 1981; Blair, 1970; Bricker & Squire, 1989) did not address validity or reliability of the measures used.

Regarding the administrators of the assessments, training was discussed in two studies (Sexton et al., 1982; Sexton et al, 1985). The words "trained" or "certified" were used in reference to

the examiners in 11 of the studies. Seven studies did not address this area. Two studies discussed the use of blind examiners (Blacher-Dixon & Simeonsson, 1981; Bricker & Squires, 1989) and six others used the words "blind examiner" or implied it in their procedures discussion.

The last area rated for measures was the use of modifications in the assessment(s). Two of the studies indicated modifications of at least one assessment (Gradel et al., 1981; Sexton et al., 1983). The authors did not indicate whether or not the validity or reliability for the modified assessment(s) was obtained.

In reviewing the studies, threats to validity were noted in all. Some of the authors recognized the existence of the threats and attempted to address them. A threat to validity is anything that could influence how the assessment measures what it is intended to measure. The possible sources of threats to internal validity include history, maturation, testing, instrumentation, statistical regression, selection, and mortality (Huck, Cormier, & Bounds, 1974). Testing and instrumentation were the two most likely threats to internal validity to cause problems in the type of research used in the studies reviewed. Testing could pose a threat to validity because the people completing the measures might be more sensitive to the content due to previous testing. Children receiving special education services are evaluated frequently and the parent can quickly become familiar with the assessment procedures and content. Instrumentation also might pose a threat. People completed the measures, making human error possible. The person's mindset could influence the scores obtained. For example, fatigue, concentration, outside influences, or personal knowledge of the child could be instrumentation threats to internal validity.

The threats to external validity include population and ecological factors (Huck et al., 1974). Of the 20 studies in the analysis, four named a specific program, school system, or hospital from which they drew their subjects (Hanson et al., 1979; Knobloch et al., 1979; Meltzer et al., 1983; Schafer et al., 1987). The remaining 16 studies (e.g. Gradel, et al., 1981; Lederman & Blair, 1972; Sexton, et al., 1982) gave little or no indication of the type of program from which they drew their subjects. Restrictions or lack of clarity about subject selection could reduce the generalizability of the data obtained from the research. There also could be an interaction between the parent's ability to respond and the measure chosen or the way the information was gathered. For example, the wording of questions could be misleading for parents or having parents complete a measure on their own might be too difficult due to poor literacy skills.

When the reliability and validity of the measures used or the reliability of the examiners was not addressed, the reader was left to draw his or her own conclusions regarding the accuracy and generalizability of the results of the study. The examiners themselves also may have influenced the findings. If the parents were interviewed, were they influenced in any way by the interviewer? Was the child influenced by the examiner? These issues may have affected the data.

The question remains, "Are parents and professionals congruent in their assessment of children with special needs?". The research suggests that a qualified "yes" would be the answer. In nine of these 20 studies, parents did not overestimate their children's abilities in relation to the professionals' scores (Beckman, 1984; Blacher-Dixon & Simeonsson, 1981; Bricker & Squires, 1989; Field et al., 1978; Hanson et al., 1979; Knobloch et al., 1979; Meltzer et al., 1983; Sexton, Miller, & Murdock, 1984; Sexton et al., 1985). The remaining 11 studies' results indicated parents overestimated their children's abilities in relation to the professionals' scores. Results from four of those 11 studies showed overestimations occurred in certain circumstances.

Mothers overestimated in comparison to the teacher for the males but not the females (Blair, 1970; Stedman et al., 1969). Overestimations on the parents part occurred only on the gross motor domain (Sexton et al., 1982). In one study, the parent overestimated the child's abilities only in comparison with the diagnostician (Sexton, Hall, & Thomas, 1984).

CONCLUSION

> *Until professionals . . . come to believe in the value of active family involvement, the intent of the legislation may not be realized. This may require a fundamental reframing of the way that professionals think of families, of service, and of their own role in early intervention. In order for early intervention teams to be family driven, professionals will have to be ready to go along with the family's wishes, needs, and goals.* [italics added] (Nash, 1990, p. 324)

Clearly, research strongly influences professional practice. Results of this review of research relating to parental and professional congruency in early childhood special education assessment has indicated that parents are a valuable source of information about their child. The inclusion of parents in the delivery of services to children is a critical characteristic of best practice. Professionals must commit to providing opportunities for parents to participate in the service delivery process. Parental information seems to be discounted by professionals who believe parents say what they think the professional wants to hear rather than objectively reporting their child's skills. This supposition prevents the parent from contributing to the richness of the information gathered in the assessment process. However, the parent is the assessment team member who spends the most time with the child and knows the child best.

Research is needed revealing the amount of information gleaned from parents on a regular basis, including how the information is gathered, the type of information obtained, and how the information is used. Techniques for facilitating parental contributions to the assessment and service delivery process would assist professional in providing family-centered services. Research of interest would an examination of information parents bring to the process that cannot be ascertained by the professional's direct observation and assessment of the child. Parents deserve validation and early childhood special education professionals need to be informed so they can implement best practice in the services provided.

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Appendix A

Summary of Findings of the Studies Reviewed

Summary of Findings of the Studies

CITATION	SUBJECTS	ANALYSES	RESULTS
Beckman, 1984	**Number of subjects** - 31 **Age of children** - 6.6 to 36.6 mos. **Special needs** - mildly to severely handicapped **People completing measures** - mothers, observers, and teachers	1. Correlation between maternal ratings of individual items on the CRIB and the observers' ratings 2. Correlation coefficients between maternal ratings on the Alpern-Boll and observers' ratings 3. Correlations between maternal and observers' ratings on caregiving checklist 4. Post hoc analysis to ascertain relationship between mother's or child's age and discrepancy between maternal and staff estimates	1. Significant correlations ($p < .05$ and .01) on 19/24 of the items 2. All correlations were significant ($p < .01$) 3. Significant correlations ($p < .05$ and .01) found on 8/11 of the items 4. Tendency noted for mothers to rate older children higher than staff on the CRIB item, "Response to Caregiver" • For older versus younger children, staff, in comparison to mothers, identified problem on caregiving checklist of child being difficult to hold, cuddle, and handle • On the Alpern-Boll, older mothers gave lower estimates of child's social skills than staff • Difference between older mothers and staff was somewhat larger than for younger mothers and staff
Blacher-Dixon & Simeonsson, 1981	**Number of subjects** - 52 **Age of children** - 9 to 75 mos. **Special needs** - mental retardation with various accompanying developmental disabilities **People completing measures** - mothers and teachers	1. Means and correlations between maternal and teacher ratings on CRIB at Time 1 2. Means and correlations between maternal and teacher CRIB ratings at Time 2 3. Correlations between maternal ratings of behavior and temperament at Time 1 and Time 2	1. Significant difference ($p < .05$) in means of one item (Endurance) • Seven correlations were significant ($p < .05$, .01, and .001) 2. Significant difference ($p < .05$) in means of one item (Social Orientation) • Six correlations were significant at ($p < .05$, .01, and .001) 3. Significant correlations ($p < .05$) on four behavior items • Significant correlations ($p < .05$, .01, and .001) on seven temperament items
Blair, 1970	**Number of subjects** - 20 **Age of children** - mean of 55 mos. for males and 54.9 mos. for females **Special needs** - at-risk for learning disability **People completing measures** - mothers and teachers	1. Comparison of mean Attainment Quotient scores of mothers and teacher for females and males 2. Comparison of PAR's mean category scores for mothers and teachers 3. Statistic not stated	1. Mothers rated males significantly higher ($p < .02$) than teachers 2. Mothers rated males higher than teachers in 3 areas on PAR 3. Maternal overevaluation occurred in intellectual categories versus social and physical categories • Maternal ratings of males higher than teachers in social category • Teacher ratings of females higher than mothers in social category

CITATION	SUBJECTS	ANALYSES	RESULTS
Bricker & Squires, 1989	**Number of subjects** - (Study I) 264; (Study II) 265 **Age of children** - 4 to 36 mos. **Special needs** - premature birth, respiratory distress syndrome (RDS), failure to thrive, and others **People completing measures** - professional examiners and mothers	**Study I and II** combined - used Revised Gesell 1. Percentage agreement of scores on assessments completed by parents and professional examiners regarding infant's classification 2. Underscreening and overscreening rates 3. Percentage agreement of scores on combined assessments completed by professional examiners and questionnaires completed by parents at the different intervals 4. Pooled under- and overscreening rates 5. Questionnaire's sensitivity and specificity 6. Percentage of infants screened as abnormal by questionnaire and combined assessments 7. T-test comparison of abnormal and normal infants, using differences between mean standard scores on Bayley Mental Developmental Index (MDI) **Study II** - used Bayley and Stanford-Binet Intelligence Test 1. Interobserver reliability between parents and professional examiners 2. Percentage agreement on infant's classification on test-retest data 3. Percentage agreement of scores on assessments completed by parents and professional examiners at the different intervals 4. Underscreening and overscreening rates	**Study I and II** combined 1. Overall percentage agreement-87% 2. Overall underscreening rate- 7% • Overall overscreening rate- 6% 3. Overall percentage agreement- 88% 4. Overall underscreening rate-6% • Pooled overall overscreening rate-6% 5. Overall sensitivity - .63 • Overall specificity - .91 6. Overall percentage screened by tests - 16% • Overall percentage screened by questionnaires -18% 7. Three test intervals had a significant difference ($p < .05$ to .0001) **Study II** 1. Interobserver reliability - 87% 2. Overall percentage agreement - 91% 3. Overall agreement - 89% 4. Overall underscreening rate - 2% • Overall overscreening rate - 8%

CITATION	SUBJECTS	ANALYSES	RESULTS
Field et al., 1978	**Number of subjects** -(Study I) 40; (Study II) 72 **Age of children** - (Study I) mean of 5 weeks; (Study II), 4-8 mos. **Special needs** - respiratory distress syndrome **People completing measures** - clinicians and mothers	**Study I** 1. Analysis of variance (ANOVA) for mothers' and clinicians' scores on the MABI 2. Correlation of maternal and clinician ratings for motor processes on MABI and Bayley Scales **Study II** 1. ANOVA for mothers' and clinicians' scores on 4- and 8-month infant temperament ratings 2. Multiple correlation analysis between 4- and 8-month intervals 3. Correlation analysis of Brazelton, infant temperament, and Bayley	**Study I** 1. Term infants more favorably rated on three areas • Clinicians gave more favorable rating than mothers in social interaction • Mothers gave higher ratings at one month than at birth 2. Correlated at 8 months for both respiratory distress syndrome and full-term group **Study II** 1. RDS infants received more "difficult" ratings at both intervals • Preterm infants received inferior summary and distractibility ratings at both intervals 2. Significant correlations ($p < .05$ to .001) between 4 and 8 month ratings on 9 areas 3. Brazelton social and motor scores more highly correlated with 4-month temperament ratings

CITATION	SUBJECTS	ANALYSES	RESULTS
Gradel et al., 1981	**Number of subjects** - 60 **Age of children** - 3 to 73 mos. **Special needs** - not reported **People completing measures** - diagnosticians, mothers, and teachers	1. Comparison of different sources' scores on Bayley 2. Comparison of different sources' scores on McCarthy 3. Comparison of different sources' scores on DP 4. Percentage agreement on item-by-item comparison 5. Comparison of standard scores and derived age equivalents 6. One-way ANOVA on infants' and children's test scores and demographic variables 7. ANOVA on congruency scores and maternal variables	1. Significant correlations ($p < .05$) between diagnosticians' and mothers' scores • Bayley provided higher predictive relationships between raters • Diagnosticians gave lower average assessments than mothers 2. Significant maternal and diagnostician correlations ($p < .05$ level) with mothers giving higher ratings 3. Significant differences ($p < .05$) with maternal ratings higher than teachers' 4. Percentage agreement between teachers and mothers on DP - 91% • Percentage agreement between diagnostician and mothers on McCarthy scales - 78% • Percentage agreement between diagnostician and mothers on Bayley Mental and Motor Scales - 76% and 75%, respectively 5. Significant correlations ($p < .05$) on the Bayley Mental and Motor developmental age (DA) equivalents and the IQE on DP 6. Significant correlations ($p < .05$) for infants between: (1) DP IQE and mothers' prior assessment experience, (2) Bayley Psychomotor Developmental Index (PDI) and levels of maternal education, (3) Bayley Motor Scale DA and mothers' prior training in child development 7. Mothers' prior assessment experience accounted for significant differences ($p < .05$) between groups for the Bayley Mental scores and three areas of the DP
Hanson et al., 1979	**Number of subjects** - 11 **Age of children** - not reported; described as infants **Special needs** - Down syndrome **People completing measures** - trained examiners, parent, and parent advisor	1. Average percentage agreement between all pairs of observers on behaviors common to Bayley and checklist 2. Spearman rank order correlation and t-test of significance between all observers' rankings of infants' relative developmental status	1. Percentage agreement of 75% on Gross Motor between all pairs • 75% agreement between parent and parent advisors on Cognitive domain 2. All correlations significant ($p < .05$) except on Cognitive domain for Bayley and advisors' rankings

CITATION	SUBJECTS	ANALYSES	RESULTS
Keith & Markie, 1969	**Number of subjects** - 17 **Age of children** - 24 to 67 mos. **Special needs** - cerebral palsy **People completing measures** - mothers, fathers, pediatrician, teacher, and physical and occupational therapists (OT)	1. Mean number of tasks performed according to ratings of observers on measures 2. Two-tailed t-test for correlated measures between mothers and fathers 3. One-way ANOVA on staff ratings 4. Mean age prediction for future performance compared between parents and staff 5. Two-tailed t-test for correlated measures between mothers and fathers 6. One-way ANOVA on staff ratings 7. Comparison of average ratings of staff and parents on each child for present and future functioning	1. Mean number of tasks performed: parents-32.26, staff-27.93 2. No significant difference between ratings of mothers and fathers 3. Pediatrician and PT ratings similar to parents; teacher and OT rated children lower than parents 4. Mean age of child's future functioning: parents - 5, staff 5.74 5. No significant difference between ratings of mothers and fathers 6. Teacher and PT ratings similar to parents; pediatrician and OT ratings lower than parents 7. Age of children and degree of disability did not create difference in parental ratings • Parents of children with a higher Developmental Quotient (DQ) agreed more closely with staff ratings than parents of children with a lower DQ
Knobloch et al., 1979	**Number of subjects** - 526 **Age of children** - 7 to 10 mos. **Special needs** - premature birth and high-risk infants **People completing measures** - unspecified professionals, mothers, and fathers	1. Comparison of categories assigned by questionnaire with diagnoses made by examination 2. Comparison of results of screeners: Gesell Questionnaire and Parent Developmental Questionnaire 3. Examination of accuracy of parental report by education and age	1. Underscreening of major abnormality - 2.6% • Underscreening of minor abnormalities - 10% • Overscreening of normal development - 6% 2. Higher percentage referred of those detected by the Gesell Questionnaire 3. Mean and range of education and age similar for overscreening, underscreening, and agreement
Lederman & Blair, 1972	**Number of subjects** - 28 **Age of children** - mean of 5.8 years **Special needs** - at-risk for school failure **People completing measures** - mothers and teachers	1. T-test comparison of maternal and teacher ratings 2. Comparison of maternal and teacher ratings with age as factor 3. Predictive validity of PAR with child's age controlled	1. Mothers' mean = 110.72, teachers' mean = 107.5 ($p<.05$) 2. Age influenced PAR ratings • Influence of age greater for mothers than for teachers, more so for social and physical behavior than intellectual behavior 3. More information gained from teacher ratings than from maternal

CITATION	SUBJECTS	ANALYSES	RESULTS
Meltzer et al., 1983	**Number of subjects** -287 **Age of children** - mean of 5.1 years **Special needs** - not specified **People completing measures** - psychologists, parents, pediatricians, nurses, and teachers	1. Multiple regression analysis to compare parental and professional perceptions 2. Comparisons of parent checklist ratings and ratings of professional groups	1. Multiple correlations with parents ranked from highest to lowest; psychologist, pediatric provider, and teacher ($p<.01$ to .001) • parental report of child's school interest best predictor of findings of professional groups 2. Parental and professional ratings more consistent on language memory, and scholastic interest
Schafer et al., 1987	**Number of subjects** - 31 **Age of children** - 1 to 27 mos. **Special needs** - premature birth, developmental delay, chromosomal disorders, Down syndrome, cerebral palsy, spina bifida, and visual impairment **People completing measures** - physical and occupational therapists and speech pathologists and caregivers	1. Correlation between parent and professional scores for each domain 2. T-test to determine pattern of agreement between parent and professionals over time 3. Examination of difference between mean scores of each domain	1. Significant ($p<.05$,.01, and .001) for 17/20 of the possible combinations 2. No significant difference in ratings on motor or social domains • Parents gave higher ratings than professionals at different testing times 3. Over time, parents lowered their ratings of children's development and professionals raised their ratings

CITATION	SUBJECTS	ANALYSES	RESULTS
Sexton et al., 1983	**Number of subjects** - 32 **Age of children** - 8 to 80 mos. **Special needs** - mental retardation, cerebral palsy, autism, and developmental delay **People completing measures** - certified diagnostician, mothers, fathers, and teachers	1. Pearson-product moment correlations between all observers on overall LAP-D scores and subscales 2. Pearson-product moment correlations between all observers on overall DP scores and subscales 3. Repeated measures ANOVA computed on all sources for overall scores on the LAP-D and subscales: Tukey's HSD post hoc tests used to examine significant differences 4. Repeated measures ANOVA computed on all sources for overall scores on the DP and subscales: Tukey's HSD post hoc tests used to examine differences	1. High positive correlations between all data sources on overall and subscale scores 2. High positive correlations between data sources on overall and subscale scores 3. Significant differences on overall LAP-D scores ($p<.05$) and on two subscales, gross motor ($p<.01$) and self-help ($p<.05$) • Mothers rated significantly ($p<.05$) higher than diagnosticians on overall scores • Mothers and fathers rated children significantly higher in gross motor and self-help domains 4. A significant difference found for overall scores ($p<.01$) and three subscales, physical ($p<.05$), communication ($p<.01$), and academic age ($p<.01$) • Significant differences ($p<.01$) between the diagnostician and mothers and diagnostician and fathers • For physical age, diagnostician rated the child lower than the other data sources • For communication age, only the diagnostician and mother differed • For academic age, mothers and fathers combined rated differently than the diagnostician
Sexton, Hall, & Thomas, 1984	**Number of subjects** - 32 **Age of children** - 8 to 80 mos. **Special needs** - not specified **People completing measures** - certified diagnostician, mothers, fathers, and teachers	1. Pearson's product-moment correlation computed between all data sources on overall and subscale scores of LAP-D and DP 2. Repeated measures ANOVA computed for overall and subscale scores on LAP-D and DP 3. Significant differences examined with Tukey's HSD post hoc test	1. High positive correlations between all four data sources for overall and subscale scores on LAP-D and DP 2. Significant differences for overall scores on LAP-D ($p<.05$) and DP ($p<.01$) 3. Significantly higher ($p<.05$) maternal than diagnostician ratings on overall scores of LAP-D • Significant differences for LAP-D subscales, gross motor and self-help, between mothers-diagnostician and father-diagnostician • Significant differences between the mother and diagnostician and father and the diagnostician on DP with parents rating the child higher • For the physical age on DP, difference between diagnostician and all other data sources • For the communication age on DP, difference between mothers and diagnostician

CITATION	SUBJECTS	ANALYSES	RESULTS
Sexton et al., 1982	**Number of subjects** - 18 **Age of children** - 7 to 72 mos. **Special needs** - mental retardation, orthopedic handicap, autism, health impairment, and other handicapping conditions **People completing measures** - evaluator and mothers	1. Pearson product-moment correlation between mothers and evaluators for overall and subscale scores 2. T-test to compare means of maternal and evaluator estimates 3. Point-biserial correlations computed to determine relationship of age on estimates	1. Strong positive correlations ($p < .001$) found on overall and subscale scores 2. Significant differences ($p < .05$) found on only the gross motor subscale with mothers rating the child higher than the evaluator 3. No relationship found between age group and item congruency
Sexton, Miller, & Murdock, 1984	**Number of subjects** - 75 **Age of children** - 8 to 80 mos. **Special needs** - Down syndrome, mental retardation, cerebral palsy, autism, and developmental delay **People completing measures** - diagnostician, mothers, and fathers	1. Percentage agreement computed between ratings of all data sources 2. Pearson product-moment correlation between demographic variables and mother-diagnostician and father-diagnostician congruency scores 3. Point-biserial correlation between type of program and congruency of scores 4. Multiple regression analysis used to determine if child or parent factors were significantly related to parent-professional congruency 5. Stepwise multiple regression analysis to determine order of contribution of variables to parent-professional congruency	1. Mothers and fathers agreed with diagnosticians on average of 82% of LAP-D items 2. Variables relating to mother-diagnostician congruency ($p < .05$ and $.01$): income, IQ of the child, and type of program • Type of program was only significant variable ($p < .01$) for father-diagnostician congruency 3. Similar relationships between type of program and congruency scores 4. No significance found 5. Family income was strongly ($p < .01$) and positively correlated to mother-professional congruency • Type of program was strongly ($p < .05$) and negatively correlated to father-professional

CITATION	SUBJECTS	ANALYSES	RESULTS
Sexton et al., 1985	**Number of subjects** - 72 **Age of children** - 8 to 80 mos. **Special needs** - mental retardation, developmental delay, cerebral palsy, and autism **People completing measures** - certified diagnostician, mothers, and fathers	1. Percentage of agreement computed between diagnostician and each parent 2. Pearson product-moment correlation between mother-diagnostician and father-diagnostician and demographic variables 3. Stepwise multiple regression completed to determine relative importance of variables 4. Multiple regression used to determine unique variance of demographic variables	1. Mean level of agreement between mother and diagnostician - 88%; father and diagnostician - 87% 2. Mother's age and family income significantly related to congruency ($p < .05$ and .01, respectively) • Father's age, family income, and sex of child significantly related to congruency ($p < .05$, .02, and .01, respectively) 3. Mother-diagnostician congruency strongly and positively correlated with family income ($p < .01$) • Father-diagnostician congruency related to father's income and sex of child ($p < .05$ and .01) 4. Amount of variance explained by each variable for mother-diagnostician congruency: family income-10%, mother's age-6%, mother's education-5%, sex of child-2%, IQ of child-2%, type of program-2%, number of other sibling-1%, age of child-1%, and time in program-0% • Amount of variance explained by each variable for father-diagnostician congruency: sex of child-15%, age of child-5%, IQ of child-2%, father's age-2%, family income-2%, father's education-1%, number of other sibling-0%, time in program-0%, type of program-0%
Sexton et al., 1990	**Number of subjects** - 53 **Age of children** - 23 to 66 mos. **Special needs** - developmental delay, Down syndrome, cerebral palsy, multihandicap, and speech/language impairment **People completing measures** - trained professional examiners and mothers	1. Canonical correlation to determine relationship between variables 2. Differences between the means and standard deviations of the five scales of the Bayley and DPII 3. Multiple regression analyses to predict differences between parental and professional scores	1. Subscales of the Bayley and DPII share large amounts of variance 2. Parents' ratings were higher than professional examiners 3. Child's IQ was the variable with the most ability to explain a difference in scores

CITATION	SUBJECTS	ANALYSES	RESULTS
Stancin et al., 1984	**Number of subjects** - (Study I) 106; (Study II) 57 **Age of children** - (Study I) 1.6 to 9 years; (Study II) 2.1 to 8 years **Special needs** - mental retardation with multiple handicaps, cerebral palsy, Down syndrome, genetic syndromes, seizure disorders, and rubella **People completing measures** - psychometricians and caregivers, including mothers, teachers, child-care aides, nurses, therapists, grandmother, ward supervisor, and teacher's aides	**Study I** 1. Raw score and DA validity coefficients between KIDS domain scores and Bayley scores 2. Difference between mean DAs of KIDS and Bayley scales **Study II** 1. Computed interjudge correlations of raw scores between maternal and teacher pairs 2. Concurrent validity coefficients between mothers and teachers 3. Comparison of KIDS DA for maternal and teacher ratings	**Study I** 1. All correlations significant ($p < .001$) 2. KIDS DA one month higher than Bayley Mental Scale and .5 months higher than Bayley Motor Scale DA **Study II** 1. All correlations significant ($p < .001$) 2. All correlations significant ($p < .001$) 3. Mother's gave significantly higher DAs ($p < .01$ and .001)
Stedman et al., 1969	**Number of subjects** - 17 **Age of children** - mean of 5.6 years **Special needs** - disadvantaged **People completing measures** - mothers and teachers	1. T-test to compare maternal and teacher ratings on PAR 2. Comparison of subtest scores on PAR of mothers and teachers	1. Mothers rated males significantly higher than the teachers ($p < .05$) • No difference in maternal and teacher ratings of females • Mothers rated males and females together higher than teachers 2. Mothers gave higher ratings than teachers in four of the eight subtests for males only